

ABSTRACT**A DEVICE AND METHOD FOR INHIBITING OXIDATION OF CONTACT
PLUGS IN FERROELECTRIC CAPACITOR DEVICES**

A ferroelectric capacitor device, such as an FeRAM device is formed of a substrate having one or more contact plugs extending therethrough, and a first interlayer dielectric layer formed on the substrate. A spacer layer is formed on the first interlayer dielectric layer, a first oxygen barrier layer is formed on the spacer layer and a buffer layer is formed on the first oxygen barrier layer. A layer of liner material is formed on the buffer layer between the buffer layer and the contact plugs and a dielectric layer is sandwiched between a first electrode and a second electrode. A second oxygen barrier layer is applied to the device. The spacer layer should prevent any oxidation from reaching the interface between the liner material and the contact plugs as this interface is located beneath the first oxygen barrier layer. As a result, the electrical contact is not damaged.

FIG. 5